

(FILE 'HOME' ENTERED AT 15:28:41 ON 01 FEB 2000)

FILE 'COMPENDEX, COMPUAB, COMPUSCIENCE, ELCOM, IFIPAT, INFODATA, INSPEC,
INVESTEXT, JICST-EPLUS, MATH, MATHDI, NLDB, NTIS, PROMT, SCISEARCH,
USPATFULL' ENTERED AT 15:30:00 ON 01 FEB 2000

L1	2 S CCMail (3W) MOBILE
L2	0 S CCMail (20W) SYNCHRONIZATION
L3	730 S CCMail
L4	159016 S SYNCHRONIZATION
L5	7 S L4 AND L3
L6	1 S CCMail (5W) REMOTE
L7	86 S CCMail/AB
L8	120406 S REMOTE/AB
L9	6 S L7 AND L8
L10	2 S CCMail/TI

File 344:Chinese Patents ABS Apr 1985-2000/Jan

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File 347:JAPIO OCT 1976-1999/SEP(UPDATED 991229)

(c) 1999 JPO & JAPIO

File 351:DERWENT WPI 1963-2000/UD=, UM=, & UP=200004

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Set	Items	Description
S1	3962	(READ? OR CHECK? OR UPDAT?) (N4) (MESSAG?)
S2	2	DIRECTORY?(N)SYNCHRONIZ?
S3	2636	(OFFSITE? OR OFF()SITE? OR REMOTE?) (N3) (PC OR PERSONAL?(-)COMPUTER? OR COMPUTER? OR MICROPROCESSOR?)
S4	4957	MOBILE?(N2)DEVICE? OR HANDHELD?(N)DEVICE?
S5	17	CC()MAIL? OR CCMAIL? OR REMOTE(N2)POST()OFFICE? OR REMOTE(- N2)MAILBOX? OR OFFSITE(N2)POST()OFFICE? OR OFFSITE?(N)MAILBOX?
S6	2	S5 AND (S3 OR S4)
S7	0	S6 AND (S1 OR S2)
S8	19	S1 AND (S3 OR S4)

6/7/1 (Item 1 from file: 351)
DIALOG(R) File 351:DERWENT WPI
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010683723 **Image available**
WPI Acc No: 96-180679/199619

Automatic sewing or embroidery machine with simple, cheap communication link - controlled by pattern data stored in remote computer mailbox for down-loading to its own integral microcomputer or by unique storage card

Patent Assignee: PFAFF AG G M (PFAF)
Inventor: HARTWIG J; REICHMANN C
Number of Countries: 002 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
DE 19501177	C1	19960411	DE 1001177	A	19950117	D05B-019/04	199619 B
US 5662055	A	19970902	US 96587575	A	19960117	D05B-019/06	199741

Priority Applications (No Type Date): DE 1001177 A 19950117

Patent Details:

Patent	Kind	Lan	Pg	Filing	Notes	Application	Patent
DE 19501177	C1		5				
US 5662055	A		5				

Abstract (Basic): DE 19501177 C

A program-controlled sewing or embroidery machine has a stitch-forming tool (2), an integrated microcomputer (4), at least one store (16,17) and at least one data interface (5) while the machine also has a keypad (12) and display (11) for entry and inspection of values belonging to the control program. Here the data interface can be connected directly via modem (6) over a data transfer link (7) to the mailbox (10) of the central computer (9) and the computer hardware, e.g. key pad, display and store, needed for communication with the mail box is placed in the machine itself, The required sequence of functions for communication with the mailbox are contributed and monitored by the microcomputer (4) controlling the machine.

USE - In machine sewing or embroidering.

ADVANTAGE - Pattern information can be stored and retrieved simply with low equipment cost by a **mailbox** of a **remote computer**.

PREFERRED MACHINE - The machine has additionally a card slot (13) for interchangeable storage cards and the pattern data can also be stored in these. A serial number identifying any particular machine is stored in its memory (16,17) and the microcomputer undertakes formatting storage card before the serial number in it. To read th card the microcomputer first identifies its serial number and compares it with the machine number and only when these numbers correspond can the microcomputer activate the stitch-forming tool. The data interface is a serial interface and data transfer can b analogue or digital telephone line or by a cordless, e.g. radio, link.

Dwg.1/2

Derwent Class: F05; T06; W01; X25

International Patent Class (Main): D05B-019/04; D05B-019/06

International Patent Class (Additional): D05B-019/08; D05B-019/12;
D05C-005/02; D05C-005/06; G05B-019/05

6/7/2 (Item 2 from file: 351)
DIALOG(R) File 351:DERWENT WPI
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010554549 **Image available**
WPI Acc No: 96-051502/199606

Electronically accessing and resetting postage meter with enhanced security - sending coded password via postal employee to manufacturer's remote computer identifying post office and employee and meter, with computer returning encrypted security code to employee after verification for input to meter

Patent Assignee: NEOPOST IND (NEOP-N)

Inventor: ABUMEHDI C; HILLEGASS R L; WEBER J C
Number of Countries: 003 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
EP 690417	A2	19960103	EP 95401301	A	19950602	G07B-017/04	199606 B

Priority Applications (No Type Date): US 94252970 A 19940602

Patent Details:

Patent	Kind	Lan	Pg	Filing Notes	Application	Patent
EP 690417	A2	E	12			

Designated States (Regional): DE FR GB

Abstract (Basic): EP 690417 A

The assessment method involves delivering the postage meter (10) to the postal employee and accessing the meter manufacturer's **remote computer** (120) using a coded password identifying the postal employee and or the post office. The postal meter similarly gains access to the computer.

An encrypted security code is transmitted to the postal employee after verification of the coded password by the meter manufacturer. The encrypted security code is entered into the postal meter. The postage registers in the postal meters are then reset. The meter is then placed in post office mode by the employee using a dedicated sealed or unsealed switch (28) or keyboard (14) inside the meter.

USE/ADVANTAGE - E.g. for electronic postage meters having electronic access control. Enhanced security by replacing mechanical key-lock, and or switch with electronic access control system requiring participation of meter manufacturer prior to resetting of meter.

Dwg.1/3

Derwent Class: T01; T05

International Patent Class (Main): G07B-017/04

International Patent Class (Additional): G07C-009/00

8/7/1 (Item 1 from file: 347)

DIALOG(R)File 347:JAPIO

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06144147 **Image available**

MOBILE COMPUTER SYSTEM, **READ** CONTROL METHOD AND **MESSAGE** TRANSMISSION CONTROL METHOD

PUB. NO.: 11-085687 [JP 11085687 A]

PUBLISHED: March 30, 1999 (19990330)

INVENTOR(s): INOUE ATSUSHI
ISHIYAMA MASAHIRO
FUKUMOTO ATSUSHI
TSUDA YOSHIYUKI
OKAMOTO TOSHIO

APPLICANT(s): TOSHIBA CORP

APPL. NO.: 09-241167 [JP 97241167]

FILED: September 05, 1997 (19970905)

ABSTRACT

PROBLEM TO BE SOLVED: To provide high security without illegal operation to user information or network information by enabling the transmission of a message from a mobile computer while using information read from an external storage **device** to the **mobile** computer only when the user recognition has been made successful.

SOLUTION: A mobile computer 2 detects that an external storage device 12 has been mounted on the computer itself. In this case, the mobile computer 2 requests the input of a password corresponding to user personal information contained in user information 123 read from the mounted external storage device 12 in a pair of user personal information and password stored in the computer itself to a user. When the inputted password and the password corresponding to the user information 123 set into the mobile computer 2 have been collated successful, information stored in the external storage device 12 is loaded to a prescribed storage device such as disk or RAM inside the mobile computer 2 immediately or as

needed, and used for required communication.

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8/7/2 (Item 2 from file: 347)

DIALOG(R)File 347:JAPIO

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03061934 **Image available**

TROUBLE REPORTING SYSTEM FOR DATA PROCESSING SYSTEM

PUB. NO.: 02-037434 [JP 2037434 A]

PUBLISHED: February 07, 1990 (19900207)

INVENTOR(s): TAKAGI HAJIME

APPLICANT(s): NEC CORP [000423] (A Japanese Company or Corporation), JP
(Japan)

APPL. NO.: 63-189348 [JP 88189348]

FILED: July 27, 1988 (19880727)

ABSTRACT

PURPOSE: To efficiently perform remote maintenance and diagnosis by detecting the abnormality of a system to store its information in a storage area and discriminating whether overflow occurs or not and generating a message of overflow in the case of overflow to send this message to a **remote computer**.

CONSTITUTION: At the time of detecting the abnormality of a data processing system during operation, an abnormality detecting means 17 starts a trouble information gathering means 18. A microprogram execution control part 11 starts a trouble information storage means 20 to write trouble information in a trouble information storage area of a defined area of a local memory 12 and starts a storage condition discriminating means 21; and when overflow of the trouble information storage area is discriminated, the dial number stored in a dial register 15 is **read** out and the **message** of storage area overflow is generated to start a transfer request means 19. Then, the transfer request means 19 requests a communication control means 16 to transfer the message to a **remote computer** (maintenance center) 6 through a public line 9.

8/7/3 (Item 3 from file: 347)

DIALOG(R)File 347:JAPIO

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02203663 **Image available**

CONNECTION SYSTEM FOR HOST COMPUTER IN JOB TRANSFER

PUB. NO.: 62-120563 [JP 62120563 A]

PUBLISHED: June 01, 1987 (19870601)

INVENTOR(s): USUI KAZUO

APPLICANT(s): NEC CORP [000423] (A Japanese Company or Corporation), JP
(Japan)

APPL. NO.: 60-261766 [JP 85261766]

FILED: November 20, 1985 (19851120)

ABSTRACT

PURPOSE: To attain the connecting operation of a host computer with application of a job done by a user by **reading** out a **message** registered previously on a message file device via a local host computer and controlling the connection with a **remote host computer**.

CONSTITUTION: A job control word JCL is extracted out of a JCL file device 6 by a job transfer information extracting means 5 of a local host **computer** 12. Thus a **remote host computer** name which identifies a **remote host computer** 13 registered on a message file device 3 via a CRT display device 1 and a message register means 2, the session start/end messages corresponding to said **remote host computer** name, etc. are

read out by a message reading means 4. Thus the computers 12 and 13 are connected automatically via a communication means 10 based on the read information of both means 4 and 5. As a result, the complicated manual connection, etc. can be eliminated to attain the automatic connection of the host computer with no malfunction and with a job applied by a user.

8/7/4 (Item 1 from file: 351)
DIALOG(R)File 351:DERWENT WPI
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012599198 **Image available**
WPI Acc No: 99-405304/199934

Increasing battery life in mobile communication device using paging channel displacement

Patent Assignee: ERICSSON INC (TELF)
Inventor: ANDERSON K W; BURDETTE B
Number of Countries: 083 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat	No	Kind	Date	Main IPC	Week
WO 9933306	A1	19990701	WO 98US26022	A	19981208	H04Q-007/38	199934	B
AU 9917168	A	19990712	AU 9917168	A	19981208	H04Q-007/38	199950	

Priority Applications (No Type Date): US 97996079 A 19971222

Patent Details:

Patent	Kind	Lan	Pg	Filing	Notes	Application	Patent
WO 9933306	A1	E	17				

Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU
CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL
TJ TM TR TT UA UG UZ VN YU ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW

AU 9917168 A Based on WO 9933306

Abstract (Basic): WO 9933306 A1

NOVELTY - If a pager or other message broadcast is sent immediately for a **mobile communication device** (10), the page continuation bit is examined at 24, to determine if any part of the message is for this device.

DETAILED DESCRIPTION - If a message for another mobile station is detected at step 26, the mobile station reads the first part of the next 'short message service', 'paging channel' and 'access response channel' (SPACH) slot in the broadcast transmission and the number of frames is determined following for a different mobile state at 32. If that number exceeds the frame length for the expected message, the device enters a low power state at 34 until the next paging signal.

USE - Increasing battery life of pagers and cellular telephones by putting device in standby operation sooner than IS-136 process calls for.

ADVANTAGE - Reduced time for mobile station drawing power to determine if it does not need to **read message**.

DESCRIPTION OF DRAWING(S) - The drawing shows the the drawing is a flow diagram of power saving logic of the present invention.

And 'access response channel' (SPACH)

Mobile communication device (10)

pp; 17 DwgNo 1/3

Derwent Class: W01; W02; W05

International Patent Class (Main): H04Q-007/38

8/7/5 (Item 2 from file: 351)
DIALOG(R)File 351:DERWENT WPI
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012203159 **Image available**
WPI Acc No: 99-009265/199901

Database managing method for distributed computer system using RDF -

involves transmitting replay and error messages to local computer for each transmitted message buffer and reading audit records for initiating reset operations of database modifications

Patent Assignee: TANDEM COMPUTERS INC (TAND)

Inventor: CARR R W; GARRARD B; MOSHER M

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
US 5835915	A	19981110	US 95377152	A	19950124	G06F-017/30	199901 B
			US 96704111	A	19960828		
			US 96761725	A	19961206		

Priority Applications (No Type Date): US 96761725 A 19961206; US 95377152 A 19950124; US 96704111 A 19960828

Patent Details:

Patent	Kind	Lan	Pg	Filing Notes	Application	Patent
US 5835915	A		47	Cont of	US 95377152	
				CIP of	US 96704111	
				CIP of		US 5740433

Abstract (Basic): US 5835915 A

The method involves receiving several message buffers from a local computer (210), each of which having an associate sequence number, some of which having one or more audit records. The sequentially transmitted message buffers have associated sequence numbers that follow a predefined sequence and each audit record has an associate audit trail position. An expected sequence number and a restart audit trail position relating to the received message buffers, are stored. The received audit records are distributed to several image trail buffers each of which including master and auxiliary image track buffers and several image trail files. A marked subset of the audit records of each auxiliary image trail buffer and associated storage location in the image trail file, are stored. A reply message is sent to the local computer, for each transmitted message buffer whose associated message sequence number matches the expected sequence number, for reuse of the message buffer.

An error message is transmitted to the local computer, which indicates a need to resynchronise the transmission at the restart audit trail position for each transmitted message buffer whose associated message sequence number does not match the expected sequence number. The audit records in the image trail files are read and the reset operations of database modifications denoted in a subset of the read audit records, are initiated.

ADVANTAGE - Monitors database modification on local computer and maintains copy of modified database on **remote computer** . Provides complete fail over protection against all failures, with reduced overhead on RDF system. Ensures integrity of RDF for any type of failure. Provides RDF system with intact synchronization between extractor and receiver processes that does not relay on frequent check pointing, thereby avoiding high overhead. Enables efficient transmission of audit records from extractor process to receiver process.

Dwg.4/11

Derwent Class: T01

International Patent Class (Main): G06F-017/30

8/7/6 (Item 3 from file: 351)

DIALOG(R) File 351:DERWENT WPI

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011559686 **Image available**

WPI Acc No: 97-536167/199749

Detection method for unauthorised alteration of advertisements from remote computer - determining at local computer if advertisement was changed, if not it is output and user can create email message and read messages from remote computer, if it was then alteration event is recorded in file stored in local computer memory

Patent Assignee: JUNO ONLINE SERVICES LP (JUNO-N)

Inventor: MARSH B D; MCAULIFFE J D; MORAES M A

Number of Countries: 076 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
WO 9740601	A1	19971030	WO 97US6041	A	19970411	H04L-009/00	199749 B
AU 9724562	A	19971112	AU 9724562	A	19970411	H04L-009/00	199811
US 5838790	A	19981117	US 96635275	A	19960419	H04K-001/00	199902

Priority Applications (No Type Date): US 96635275 A 19960419

Cited Patents: US 5513126; US 5629980; US 5638446

Patent Details:

Patent	Kind	Lan	Pg	Filing Notes	Application	Patent
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WO 9740601	A1	E	49			
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Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN YU

Designated States (Regional): AT BE CH DE DK EA ES FI FR GB GH GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG

AU 9724562	A			Based on		WO 9740601
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Abstract (Basic): WO 9740601 A

The method establishes a link between the local and **remote** (2) **computers**, and electronically transfers an advertisement from the **remote** to the local **computer**. The advertisement is stored in the local computer memory. Email addresses are electronically transferred between the local and **remote computers**. The link is then ended between the computers.

At the local computer it is determined if the advertisement has been changed. If not, it is outputted from the local computer, and a user is allowed to create an email **message** and **read** any **messages** from the **remote computer**, at the local computer. If it was changed, an alteration event is recorded in a statistics file stored in the memory.

USE/ADVANTAGE - For electronic advertisement authentication system for detecting any tampering with advertisements that were electronically downloaded to **remote computers**. Provides accurate information to advertisers as to whether user is exposed to downloaded advertisement, when user is so exposed, and for how long.

Dwg.1A/6

Derwent Class: W01; W02; W05

International Patent Class (Main): H04K-001/00; H04L-009/00

International Patent Class (Additional): H04K-001/00

8/7/7 (Item 4 from file: 351)

DIALOG(R)File 351:DERWENT WPI

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011348794 **Image available**

WPI Acc No: 97-326700/199730

Communication equipment e.g. for facsimile with telephone answering function - has PC at remote location connected to facsimile machine through interface and system controller to raise alert on receipt of facsimile call with changing of setting through PC

Patent Assignee: RICOH KK (RICO)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
JP 9130530	A	19970516	JP 95308571	A	19951102	H04N-001/00	199730 B

Priority Applications (No Type Date): JP 95308571 A 19951102

Patent Details:

Patent	Kind	Lan	Pg	Filing Notes	Application	Patent
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JP 9130530	A		13			
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Abstract (Basic): JP 9130530 A

The communication equipment has a facsimile (F), a centronic interface (17) linking the PC (18) installed at a remote location to the facsimile for communication. An audible warning is raised on receipt of facsimile call through a speaker (8).

The equipment settings are established through the computer and interface to repeat the system controller in raising an alert when a facsimile call is received.

ADVANTAGE - Facilitates change of equipment settings from remote position. Adjusts control of volume of warning at optimum setting.

Provides indication of telephone call reception on PC . Facilitates **remote checking** of answering **messages** .

Dwg.1/5

Derwent Class: W01; W02

International Patent Class (Main): H04N-001/00

International Patent Class (Additional): H04M-001/65; H04M-011/00;

H04N-001/32

8/7/8 (Item 5 from file: 351)

DIALOG(R)File 351:DERWENT WPI

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011342273 **Image available**

WPI Acc No: 97-320178/199730

Electronic price label with bar code reader - has bar code on rear of overlay and aligned over bar code reader when overlay is installed in price label

Patent Assignee: NCR CORP (NATC)

Inventor: GOODWIN J C

Number of Countries: 002 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
CA 2173910	A	19970322	CA 2173910	A	19960411	G06K-009/18	199730 B
US 5793029	A	19980811	US 95531809	A	19950921	G06K-007/10	199839
			US 97887411	A	19970702		

Priority Applications (No Type Date): US 95531809 A 19950921; US 97887411 A 19970702

Patent Details:

Patent	Kind	Lan	Pg	Filing Notes	Application	Patent
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CA 2173910	A		18			
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US 5793029	A		Cont of		US 95531809	
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Abstract (Basic): CA 2173910 A

The electronic price label (EPL) (22) has a overlay (48) that displays information not displayed by the display (56). The overlay has a two-dimensional bar code label (62) on its rear side. When the overlay is installed the 2-D bar code label is aligned over the bar code reader. The two-dimensional bar code reader (58) reads the 2-D bar code label.

The bar code label contains data for the item associated with the price label or programming instructions for controlling the label e.g. it causes the EPL to display 'On Sale'. The reader is activated by a switch to read the bar code. The switch is activated manually or **remotely** by a **computer** coupled to the label.

USE/ADVANTAGE - To convey item's unit of measurement per unit price, schedule instruction to display promotional **messages** , product **update messages** , commands for internal diagnostic procedures.

Dwg.2,3,4/

5

Derwent Class: T04; T05

International Patent Class (Main): G06K-007/10; G06K-009/18

International Patent Class (Additional): G06F-017/60

8/7/9 (Item 6 from file: 351)

DIALOG(R)File 351:DERWENT WPI

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011320487 **Image available**

WPI Acc No: 97-298391/199727

Remote auditing of computer generated outcomes using cryptographic and other protocols - allows person playing game on computer to submit outcome to central authority who then certify that outcome has been accurately reported and fairly achieved

Patent Assignee: WALKER ASSET MANAGEMENT LP (WALK-N)

Inventor: JORASCH J; SCHNEIER B; WALKER J S; WALKER J

Number of Countries: 075 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat	No	Kind	Date	Main IPC	Week
WO 9719537	A1	19970529	WO 96US18834	A	19961122	H04L-009/32	199727	B
AU 9710819	A	19970611	AU 9710819	A	19961122	H04L-009/32	199740	
US 5768382	A	19980616	US 95561668	A	19951122	H04L-009/32	199831	
EP 862824	A1	19980909	EP 96940863	A	19961122	H04L-009/32	199840	
			WO 96US18834	A	19961122			
US 5970143	A	19991019	US 95561668	A	19951122	H04L-009/32	199950	
			US 96677544	A	19960710			

Priority Applications (No Type Date): US 96694469 A 19960808; US 95561668 A 19951122; US 96677544 A 19960710

Cited Patents: 05 7393100; 05 20292300; 05 24365200; 05 29720500; 05 50873100; 5539822

Patent Details:

Patent	Kind	Lan	Pg	Filing Notes	Application	Patent
WO 9719537	A1	E	189			
Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN						
Designated States (Regional): AT BE CH DE DK EA ES FI FR GB GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG						
AU 9710819	A			Based on	WO 9719537	
EP 862824	A1	E		Based on	WO 9719537	
Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE						
US 5970143	A			CIP of	US 95561668	
				CIP of	US 5768382	

Abstract (Basic): WO 9719537 A

The computer device has a memory with encoding control code embodied within it. A processor is disposed in communication with the memory. The processor processes the encoding control code in conjunction with a computer game outcome to generate an encoded message corresponding to the computer game outcome and to transmit the encoded message to a human-readable output device.

Preferably, the human-readable output device is a display device. The memory further contains game program execution code embodied within it, which the processor executes to generate the computer game outcome.

USE/ADVANTAGE - Allows use of game to be metered using cryptographic protocols without compromising secure encrypted portions of programs. Allows use of game computer to be metered using similar protocol.

Dwg.9/28

Derwent Class: T01; W01; W04

International Patent Class (Main): H04L-009/32

International Patent Class (Additional): G06F-019/00; G06F-161/00; G06F-161-00

8/7/10 (Item 7 from file: 351)

DIALOG(R)File 351:DERWENT WPI

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010803905 **Image available**

WPI Acc No: 96-300858/199630

Remote acquisition-control system for domestic utilities consumption -
uses servers remote from client locations to poll stored consumption data
stored, responses being sent on predetermined hop-map frequencies

Patent Assignee: DELANEY P J (DELA-I)

Inventor: DELANEY P J

Number of Countries: 017 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat	No	Kind	Date	Main IPC	Week
WO 9618982	A1	19960620	WO 95US16052	A	19951212	G08C-015/06	199630	B
US 5541589	A	19960730	US 94356842	A	19941215	G08B-023/00	199636	

Priority Applications (No Type Date): US 94356842 A 19941215

Cited Patents: US 4811011; US 4940976; US 5438329

Patent Details:

Patent	Kind	Lan	Pg	Filing Notes	Application	Patent
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WO 9618982	A1	E	31			
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Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL
PT SE

US 5541589	A	13
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Abstract (Basic): WO 9618982 A

The system includes meters (12), located at each client location, for registering consumption data of eg. electricity, water, gas, etc. The data is stored in memory via **microprocessor** (14). A **remote** server polls the consumption data from the client locations individually, with response periods between messages, which include correction fields for receiver checking of errors.

The remote server scans a range of RF to assess traffic and noise, using the information to create a radio-frequency 'hop-map'. The map data is transmitted to client locations, with switch-over times, for subsequent use when responding to polling messages.

USE/ADVANTAGE - For accurate, cost-effective, remote meter-reading of domestic energy etc. consumption, not requiring personnel to visit premises, efficiently avoiding communication interferences by sequentially transmitting individual polling messages.

Dwg.3/10

Abstract (Equivalent): US 5541589 A

A method of remotely gathering consumption data from a plurality of utility client locations, comprising:

providing a server remote from said client locations, and providing each client location with a client identification;

at each client location, automatically generating and storing consumption data;

transmitting from said server to each said client location a radio frequency polling message having a client identification field;

at each said client location, automatically carrying out the steps of receiving polling **messages** from said server, **checking** each said **message** received for said client location's client identification, and, for each said message that includes said client location's client identification, preparing a response that includes said consumption data and sending said response to the server by a radio frequently transmission; and

at the server, receiving said response from said client location;

at the server, automatically performing the steps of scanning a range of radio frequencies to measure traffic and noise, creating a radio frequency hop map using information obtained from said scanning, and transmitting said hop map to said client locations; and

at each said client location, storing said hop map and subsequently transmitting responses to polling messages on frequencies designated by said hop map.

Dwg.1/10

Derwent Class: S01; S02; U25; W01; W05

International Patent Class (Main): G08B-023/00; G08C-015/06

International Patent Class (Additional): G08C-019/04; G08C-019/16;

H04B-001/00

DIALOG(R)File 351:DERWENT WPI
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010580669 **Image available**

WPI Acc No: 96-077622/199608

Secure remote gaming system with link to casino - includes host and gaming computers allowing player to purchase and redeems gambling credit at remote location using cryptographic protocols through series of authenticatable message exchanges

Patent Assignee: WALKER ASSET MANAGEMENT LP (WALK-N)

Inventor: SCHNEIER B; WALKER J

Number of Countries: 059 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
WO 9600950	A1	19960111	WO 95US8206	A	19950628	G06F-155/00	199608 B
AU 9529531	A	19960125	AU 9529531	A	19950628	G06F-019/00	199617

Priority Applications (No Type Date): US 95406224 A 19950316; US 94269248 A 19940630

Cited Patents: US 4317957; US 5038022; US 5083271; US 5096195; US 5351970; US 5380007; US 5413357

Patent Details:

Patent	Kind	Lan	Pg	Filing Notes	Application	Patent
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WO 9600950	A1	E	82			
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Designated States (National): AM AT AU BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IS JP KE KG KR KZ LK LT LU LV MD MG MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TT UA UG UZ VN

Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL OA PT SE

AU 9529531	A			Based on		WO 9600950
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Abstract (Basic): WO 9600950 A

The system includes a host computer which enables a player at a remote location to purchase and redeem gambling credit. The computer generates at least one authenticatable message to be provided from the host computer. The computer reads and authenticates at least one authenticatable message to be provided to the host computer. An off-line gaming computer on which the player wagers on at least one wagering opportunity is disposed **remotely** from the host computer. The gaming computer generates at least one wagering opportunity and enables the purchasing, storing and redeeming of gambling credit.

The gaming computer further generates the authenticatable message to be provided to the host computer. The gaming computer **reads** and authenticates the **message** from the host computer. The messages exchanged between the host computer and the gaming computer enable a player to purchase and redeem gambling credit.

ADVANTAGE - Allows player to engage in gambling at his own convenience assuming computer link is currently available. Choice of games. PIN number access prevents unauthorized gambling. Not necessary to establish on-line connection with host computer.

Dwg.1A/15

Derwent Class: T01; W01; W04

International Patent Class (Main): G06F-019/00; G06F-155/00

International Patent Class (Additional): G06F-161/00

8/7/12 (Item 9 from file: 351)

DIALOG(R)File 351:DERWENT WPI

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010401106 **Image available**

WPI Acc No: 95-302419/199539

Exchanging asynchronous link level messages between system manager and remote facility in LAN - determining if system manager is ready to exchange messages with remote facility, transmitting command message contg. command identification and command message fields, and transmitting command reply message in response

Patent Assignee: COMPAQ COMPUTER CORP (COPQ)

Inventor: DOBYNS P E; FARRAND S C; HERNANDEZ T J; JOHNSON S R; MILLER A J;
NEYLAND R A; STUPEK R A

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
US 5444849	A	19950822	US 91756509	A	19910909	G06F-013/14	199539 B
			US 9390920	A	19930712		B

Priority Applications (No Type Date): US 91756509 A 19910909; US 9390920 A 19930712

Patent Details:

Patent	Kind	Lan	Pg	Filing Notes	Application	Patent
US 5444849	A		22	Div ex	US 91756509	
				Div ex		US 5257384

Abstract (Basic): US 5444849 A

The protocol determines whether the system manager is **ready** to exchange **messages** with the remote facility, and whether the remote facility is **ready** to exchange **messages** with the system manager, and exchanges messages between the system manager and the remote facility. To exchange messages, a command message which includes a first field for identifying a command transmitted by the command message and a second field for identifying the command message is transmitted.

In response, a command reply message which includes a first field for identifying the command to which the command reply message is in response to, a second field for matching the command response message to the command message and a third field for transmitting a response to the command message is transmitted.

ADVANTAGE - Protocol for communicating messages between manager for **computer** system and **remote** facility asynchronously connected with system manager.

Dwg.5/5

Derwent Class: T01; W01

International Patent Class (Main): G06F-013/14

8/7/13 (Item 10 from file: 351)

DIALOG(R)File 351:DERWENT WPI

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009657639 **Image available**

WPI Acc No: 93-351191/199344

Asynchronous protocol for computer system manager - determines if system manager ready to exchange messages with remote facility and vice versa, and exchanges messages by transmitting command message and reply, where message has fields identifying command and message

Patent Assignee: COMPAQ COMPUTER CORP (COPQ)

Inventor: DOBYNS P E; FARRAND S C; HERNANDEZ T J; JOHNSON S R; MILLER A J;
NEYLAND R A; STUPEK R A

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
US 5257384	A	19931026	US 91756509	A	19910909	G06F-013/14	199344 B

Priority Applications (No Type Date): US 91756509 A 19910909

Patent Details:

Patent	Kind	Lan	Pg	Filing Notes	Application	Patent
US 5257384	A		23			

Abstract (Basic): US 5257384 A

The protocol for communicating messages between a manager for a **computer** system and a **remote** facility asynchronously connected with the system manager. The protocol determines whether the system manager is **ready** to exchange **messages** with the remote facility, determines whether the remote facility is **ready** to exchange **messages** with the system manager and exchanges messages between the system manager and the remote facility.

To exchange messages, a command message which includes a first

field for identifying a command transmitted by the command message and a second field for identifying the command message is transmitted. In response, a command reply message which includes a first field for identifying the command to which the command reply message is in response to, a second field for matching the command response message to the command message and a third field for transmitting a response to the command message is transmitted.

USE/ADVANTAGE - for data transfers between remote or out-of-band local system manager facility and system manager. Protocol has flexibility of use.

Dwg.5/5

Derwent Class: T01; W01

International Patent Class (Main): G06F-013/14

8/7/14 (Item 11 from file: 351)

DIALOG(R)File 351:DERWENT WPI

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009627393 **Image available**

WPI Acc No: 93-320942/199340

Interactive advertising system for on-line terminals, eg used for home-shopping - includes remote terminals having video display unit, logic unit and video storage medium, with computer communicating with terminals to display advertising while user is waiting for on-line information

Patent Assignee: MURPHY A J (MURP-I); SINGER G (SING-I)

Inventor: MURPHY A J; MURPHY A

Number of Countries: 042 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
WO 9319427	A1	19930930	WO 93US2861	A	19930324	G06F-015/21	199340 B
AU 9339372	A	19931021	AU 9339372	A	19930324	G06F-015/21	199407
US 5305195	A	19940419	US 92856250	A	19920325	G06F-015/21	199415
EP 638186	A1	19950215	EP 93908610	A	19930324	G06F-015/21	199511
			WO 93US2861	A	19930324		
CA 2132719	A	19930930	CA 2132719	A	19930324	G06F-015/21	199533
JP 7507169	W	19950803	JP 93516850	A	19930324	G06F-017/60	199539
			WO 93US2861	A	19930324		

Priority Applications (No Type Date): US 92856250 A 19920325

Cited Patents: JP 3204259; JP 57003167; US 32115; US 4672554; US 4973952; US 5091713

Patent Details:

Patent	Kind	Lan	Pg	Filing Notes	Application	Patent
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WO 9319427	A1	E	23			
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Designated States (National): AT AU BB BG BR CA CH CZ DE DK ES FI GB HU JP KP KR LK LU MG MN MW NL NO NZ PL PT RO RU SD SE SK UA

Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL OA PT SE

AU 9339372	A			Based on		WO 9319427
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US 5305195	A		10			
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EP 638186	A1	E	2	Based on		WO 9319427
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Designated States (Regional): CH DE ES FR GB IT LI

JP 7507169	W		9	Based on		WO 9319427
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Abstract (Basic): WO 9319427 A

The system includes a number of remotely located terminals (12). Each terminal has a video display unit (20), a logic unit (19) and a video storage medium such as a hard disc (18). A **remote** centrally located commercial **computer** (10) communicates with each terminal. The computer is capable of transmitting digital commercial offering signals and compressed video signals for display on the display unit.

The compressed video signals are stored on the hard disc of each terminal for display on the display unit at times determined by the terminal user. The user selects the services or goods offered by the terminal in the conventional manner. During the waiting time inherent in the operation of the terminal, a high quality video advertising message is displayed on the video unit.

ADVANTAGE - Allows high quality message display.

Dwg.1/5

Abstract (Equivalent): US 5305195 A

Each terminal includes a video display unit, logic and a video storage medium such as a hard disc in addition to the normal functions of the interactive system of which an ATM is an example. A **remote** centrally located commercial **computer** capable of transmitting digitized signals representing commercial offerings and compressed digitized video signals for display on the video unit communicates with each of the remotely located terminals. The compressed digitized video signals are stored on the hard disc of each terminal for display on the video unit at times determined by the use of the terminal. The user selects the services or goods offered by the terminal in the conventional manner. During the waiting time inherent in the operation of the terminal a high quality video advertising message is displayed on the video unit from the hard disc. The message will last for less than 15 seconds and the user selected function will continue at the conclusion of the message. The advertising **message** will be changed, **updated** and varied directly from the central computer.

Dwg.1/5

Derwent Class: T01; W02; W05

International Patent Class (Main): G06F-015/21; G06F-017/60

International Patent Class (Additional): G06F-015/40

8/7/15 (Item 12 from file: 351)

DIALOG(R) File 351:DERWENT WPI

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008116638 **Image available**

WPI Acc No: 90-003639/199001

Pager for receiving message data and displaying it - has TV receiver to accept TV radio wave and colour designation circuit to display message in colour on LCD screen

Patent Assignee: CASIO COMPUTER CO LTD (CASK)

Inventor: KOBAYASHI K; TSUKAMOTO A

Number of Countries: 002 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
JP 1286532	A	19891117	JP 88115319	A	19880512		199001 B
US 5005013	A	19910402	US 88219348	A	19880714		199116
US 5138312	A	19920811	US 88219348	A	19880714	H04Q-007/00	199235
			US 91651452	A	19910205	T	

Priority Applications (No Type Date): JP 88115319 A 19880512; JP 87176047 A 19870716

Patent Details:

Patent	Kind	Lan	Pg	Filing Notes	Application	Patent
US 5138312	A		39	Cont of	US 88219348	
				Cont of		US 5005013

Abstract (Basic): US 5005013 A

The paper has a radio receiver for demodulating a modulated signal including an identification number and message data. An identification number memory stores a self identification number. A reception control circuit discriminates whether the received identification number coincides with the identification number stored in the memory, and for, is a coincidence is detected, **reading** the received **message** data. A message memory stores the **message** data **ready** by the reception control circuit.

A colour is provided for displaying the message data stored as a colour designated by the display colour designator. The designator has a circuit for designating the display colour in accordance with the amount of time which has elapsed since the reception of the message data.

ADVANTAGE - Improved identification of message. (First major country equivalent to J01286532)

Dwg.2/23

Abstract (Equivalent): US 5138312 A

The pager has a TV receiver for receiving a TV radio wave which causes the display to display a TV image. The pager has a colour designation circuit for designating a display colour of a message.

The colour designation circuit designates the display colour of the message in accordance with a predetermined method for emphasising the message. The display then displays the message in the designated colour.

USE/ADVANTAGE - Pager with TV receiving function. Easy identification of displayed message. Has colour display. Pager and LC TV are **handheld devices**.

Dwg.2/23

Derwent Class: W02; W03; W05

International Patent Class (Main): H04Q-007/00

International Patent Class (Additional): G08B-005/22; H04B-007/26

8/7/16 (Item 13 from file: 351)

DIALOG(R) File 351:DERWENT WPI

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007459834 **Image available**

WPI Acc No: 88-093768/198814

Card, esp. credit or service-till card - has bar code, ROM or magnetic strip holding data which is read out and stored in computer memory for signature comparison on screen

Patent Assignee: BORG E J (BORG-I)

Inventor: WHITWORTH J F

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
GB 2195290	A	19880407	GB 8622375	A	19860917		198814 B

Priority Applications (No Type Date): GB 8622375 A 19860917

Patent Details:

Patent	Kind	Lan	Pg	Filing	Notes	Application	Patent
GB 2195290	A		4				

Abstract (Basic): GB 2195290 A

A magnetic strip, bar code or ROM on the card holds a coded **message** which can be **read** by a reader attached to a terminal or an intelligent till. The reader is connected to a **remote computer** memory so that it may transfer the same or a different coded message to trigger the release of the representation of the signature. The representation may then be transmitted to and displayed on a screen visible to the retailer alone.

The retailer compares the representation with a signature tendered at the beginning of the particular transaction. Instead of the retailer comparing the recalled representation with a freshly provided signature on a counterfoil, the signature tendered may be digitised, e.g. by camera or pressure pad, or processed and displayed.

ADVANTAGE - Reduces likelihood of credit or cash card fraud

Derwent Class: T04; T05

International Patent Class (Additional): G06K-019/00

8/7/17 (Item 14 from file: 351)

DIALOG(R) File 351:DERWENT WPI

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007408199

WPI Acc No: 88-042134/198806

Remote subscribers and computer interface - has channel selector output to duty setter for dynamic variation of message sequence fed to computer

Patent Assignee: LYCHEV L V (LYCH-I)

Inventor: AKSENOV E N; STISHKOVSK V L

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
SU 1322300	A	19870707	SU 3959649	A	19851001		198806 B

Priority Applications (No Type Date): SU 3959649 A 19851001

Patent Details:

Patent	Kind	Lan	Pg	Filing Notes	Application	Patent
SU 1322300	A		15			

Abstract (Basic): SU 1322300 A

Interface contg. memory (1) with output (20) to computer, channel selector (2), channel interrogator (3), channels (4) priority coder (6) and the queue corrector (9), has the time mark units (5.1-5.n) time readout unit (7), duty setter (8) and the queuing unit (10).

When there free channels (memory zones), the channel selector forms a signal for the duty setter which presents a **ready** signal to the **message** source unless there is an inquiry from the computer. The sequence in which the messages are fed to the computer is varied dynamically with regard to the time when the messages arrive in the data-exchange network. So messages are more likely to be delivered to the computer promptly. In forming the message queue the arrival time of the message is taken into account as well as the category of urgency.

USE/ADVANTAGE - In computer engineering and systems processing data from communication channels of remote subscribers, performance is improved by dynamic sequencing of the connections. Bul.25/7.7.87

1/10

Derwent Class: T01

International Patent Class (Additional): G06F-013/20

8/7/18 (Item 15 from file: 351)

DIALOG(R)File 351:DERWENT WPI

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007196298

WPI Acc No: 87-193307/198728

Verification of authenticity of document and bearer identity - has processor to extract hidden relationship between number of document and secrete message attesting authorised user

Patent Assignee: CEN CENTRE ETUDE EN (CENN); CENT ETUD ENERGIE NUCLEAIRE (CENN)

Inventor: BINARD L A M; COUPE B G P; MUSYCK E P H

Number of Countries: 014 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
EP 229006	A	19870715	EP 86870182	A	19861204		198728 B
LU 86203	A	19870724					198736
US 4816655	A	19890328	US 86939651	A	19861209		198915
EP 229006	B	19920129					199205
DE 3683751	G	19920312					199212

Priority Applications (No Type Date): LU 86203 A 19851211

Cited Patents: 2.Jnl.Ref; EP 30381; FR 2471632; GB 2114791; GB 2140179; US 3956615; US 4218738; US 4405829

Patent Details:

Patent	Kind	Lan	Pg	Filing Notes	Application	Patent
EP 229006	A	F	14			

Designated States (Regional): AT BE CH DE ES FR GB GR IT LI NL SE

US 4816655 A 13

EP 229006 B

Designated States (Regional): AT BE CH DE ES FR GB GR IT LI NL SE

Abstract (Basic): EP 229006 A

A single-chip microcomputer is used in conjunction with a keyboard and a document reader having e.g. a magnetic read head and an integrated shaping circuit coupled to the computer input ports. The output ports drive a liq. crystal display with an integrated control circuit sharing the battery power supply (5) with the other units.

The mathematical processing involves one or more encodings by cryptography using only public keys, and verification of correspondence with a non-secret reference number independent of the document and with information appearing thereon in uncoded form.

USE/ADVANTAGE - For credit or bank card, cheque or access authorisation badge, no secret information is required to be stored on the document itself or in the verification appts. or other documents.

0/7

Abstract (Equivalent): EP 229006 B

Method intended to verify the authenticity of a document associated with a person, such as a credit card, bank card, cheque, access badge, as well as the identity of its holder by carrying out an information processing on the basis of at least one secret message (M) attesting the identity of the holder of the document, characterised in that it consists in making use of a document provided with a special characteristic datum (S), not necessarily secret, having a secret relation with the secret message (M), in introducing the information relating to the secret message (M) and to the characteristic datum (S) into a computer, in performing by means of the said computer on the basis of at least the said information a mathematical processing whose algorithm is not necessarily secret, the said mathematical processing comprising an encryption (EB) or several encryptions (EA,EB,...) according to a public-key cryptographic method, using to do this only keys (A',B'...) which are not necessarily secret, in obtaining a result (T) from the said mathematical processing, in verifying that the result (T) comprises a not necessarily secret reference number (F) independent of the document, and in furthermore obtaining on the basis of the result (T) identification information appearing uncoded on the document. (24pp)

Abstract (Equivalent): US 4816655 A

A reader reads document characteristics, circuitry permits the formation of a message confirming the holder identity and a computer is connected to the **reader** and **message** appts. The computer is designed to be able to perform from data obtained by the reader and possibly from other remotely-conveyed data.

Mathematical processing includes one or a number of encipherings according to a public-key cryptography method and making use of public keys. Appts. is provided to check with the computer, by a third party, and/or **remotely** with another **computer**, the expected match between the collected data, a non-secret number independent from the document and identification data present unscrambled on the document, which match is disclosed by the mathematical processing. (13pp)r

Derwent Class: T04; T05

International Patent Class (Additional): G06F-000/00; G06K-005/00; G07F-007/10

8/7/19 (Item 16 from file: 351)

DIALOG(R) File 351:DERWENT WPI

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004519062

WPI Acc No: 86-022406/198604

Secured message transfer method using updated session code - storing validation and account numbers and sync. key stored for access by hoist computer at remote location

Patent Assignee: TANDEM COMPUTERS INC (TAND); ATALLA CORP (ATAL-N)

Inventor: ATALLA M M; MARACCHINI D J

Number of Countries: 006 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
EP 168667	A	19860122	EP 85107626	A	19850620		198604 B
CA 1255769	A	19890613					198928
EP 168667	B	19920304					199210
DE 3585469	G	19920409					199216

Priority Applications (No Type Date): US 84632297 A 19840719

Cited Patents: A3...8821; EP 112943; EP 112944; EP 131906; GB 205002;

No-SR.Pub

Patent Details:

Patent	Kind	Lan	Pg	Filing	Notes	Application	Patent
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EP 168667 A E 26

Designated States (Regional): CH DE FR GB LI

EP 168667 B

Designated States (Regional): CH DE FR GB LI

Abstract (Basic): EP 168667 A

A validation number is produced that is unique to a user as a logical encoding combination of the user's account number and code information received from the user. A sync key and sync index are formed and a sync number produced in accordance with a second logical encoding combination of the sync key and index and the user's account number.

The sync index and sync number are stored for access at the user's location and the validation number, account number and sync key are stored for access at a remote location. Thus, an identified authorised user who has signed on can transmit securely to **remotely** located host **computer** using unsecured communication channel such as telephone, mail etc.

ADVANTAGE - After each data-transfer session, selected information in storage at each location is changed so that storage medium may not be duplicated and used without essential information from authorised user.

1/4

Abstract (Equivalent): EP 168667 B

A validation number is produced that is unique to a user as a logical encoding combination of the user's account number and code information received from the user. A sync key and sync index are formed and a sync number produced in accordance with a second logical encoding combination of the sync key and index and the user's account number.

The sync index and sync number are stored for access at the user's location and the validation number, account number and sync key are stored for access at a remote location. Thus, an identified authorised user who has signed on can transmit securely to **remotely** located host **computer** using unsecured communication channel such as telephone, mail etc.

ADVANTAGE - After each data-transfer session, selected information in storage at each location is changed so that storage medium may not be duplicated and used without essential information from authorised user. (26pp Dwg.No.1/4

Derwent Class: T01; T05; W01

International Patent Class (Additional): G07F-007/10; H04L-009/02;

H04L-009/08

?

Journal: LAN Magazine Oct 1996 v11 n11 p151(5)
COPYRIGHT 1996 Miller Freeman Inc.

Title: Notes from the groupware battlefield.
(Lotus Notes 4.1) (includes executive summary)
Author: Fogle, Dave

Abstract: Lotus Notes 4.1 is the latest upgrade of the leading workgroup package and includes some significant improvements, including an easier-to-navigate interface and built-in Internet connectivity. The package, like Microsoft Exchange, offers tightly integrated E-mail, and the base version now supports remote access. Installation is simple, but setting up a Notes system still takes careful planning. Ease of use is vastly improved due to the new interface, which uses split window panes and folders for navigation. New mobility features include Server PassThrough, which lets remote users dial in to a single Notes server and gain access only to servers that have defined that particular PassThrough unit. Other new features include field-level replication and the powerful LotusScript scripting language. Lotus now includes the InterNotes Web Navigator and Web Retriever utilities for HTML publishing and will offer true Internet integration with the upcoming Domino server. Pricing is \$495 for the single-processor server, \$2,295 for the multiprocessor server and \$69 to \$279 per client.

Full Text:

Lotus has put some "notable" improvements into its flagship groupware product, making it easier than ever to navigate.

Finding a short, descriptive phrase to describe Lotus Notes has always been difficult. Descriptions such as "free-form database" or a "collection of related documents" always fall short of the mark. Longer, more involved summaries of Notes' features tend to leave out the general feel of the product, and unless a new user has actually seen Notes in action, such a description conceals the power of this groundbreaking software category.

Despite the difficulty in describing the product's features, large numbers of companies have installed it and are using it. For a good portion of its history, Notes was able to dominate its software category, primarily because no other product offered quite the same combination of features as Notes.

With Microsoft's release of Exchange, Notes faces its most formidable competition yet. Fortunately, Lotus has substantially revised and strengthened its groupware offering to withstand Microsoft's onslaught. Although the products don't offer identical features, many companies considering group-enabled software will narrow their choices to these two contenders. The similarities between Microsoft's and Lotus' products are striking: shared documents with free-form text and database-like capabilities and strong electronic mail features. Both products are responses to user demands for more enhanced email capabilities (bear in mind that neither Notes 3.0 nor Microsoft Mail--Microsoft's predecessor to

Exchange--were heavyweights in the e-mail category).

The differences between Notes and Exchange are as important as their similarities. While the shared folder capability of Exchange developed as an extension to e-mail, Notes' e-mail capabilities evolved the opposite way, emerging as an extension to the Notes document database--some would describe e-mail in Notes 3.0 as an afterthought. With Notes 4, Lotus has greatly improved the e-mail portion of Notes, giving it a strong resemblance to cc:Mail, but retaining the mail database's reliance on the Notes replication engine. Figure 1 shows the updated Notes interface, complete with folders and selectable views.

JUMPING IN WITH BOTH FEET

The rapid emergence of Web authoring tools and HTML document management tools has prompted many companies to evaluate and install intranets--which are sort of company-wide Webs, rather than a World Wide Web. As more and more companies have considered assembling internal HTML document stores and making them available to their employees (or to customers and vendors) as an alternative to more traditional groupware applications, Lotus has taken note and incorporated Web browsing and Web page authoring into Notes 4.1.

The fact that one of Notes' strengths is its document management capabilities makes Notes an intelligent platform for coping with burgeoning numbers of published HTML documents. Because documents in the database remain in Notes format, it's easy for users to update them, and those documents can be viewed easily by the widest possible range of users: Local Notes clients can view them in native format, remote Notes users can create a replica of the database and view the documents later, and users without access to Notes can use a Web browser, such as Netscape Navigator or Microsoft Internet Explorer, to access the message store.

Accessing the database in Notes form allows remote users to reduce telephone charges by retrieving updates to the database during off-peak hours. Once the database is loaded on the remote computer, the user doesn't have to maintain a continuous telephone connection to read documents stored in the database. Figure 2 (page 152) shows a sample home page viewed from within InterNotes Navigator (the Notes HTML browser).

Some companies will still prefer the free-form flexibility of an HTML-only intranet solution, but Lotus is providing as many tools as possible to convince these companies to use Notes as their intranet publishing solution.

INSTALLATION

Installation of the first server in an organization is easy: Just run the installation program and fill in a few configuration screens. Unfortunately, unless you've carefully planned out your organizational structure, you'll end up reinstalling and reconfiguring the software. The new version of Notes provides more options that can be changed after the fact, but there is still a number of options that don't seem to show up in any of the readily accessible configuration databases. Luckily for the planning-impaired, there's an easy way to restart the configuration process without completely reinstalling the software: Delete all text in the notes.ini file except for the Notes header and the KitType and Directory parameters.

Likewise, installing subsequent servers within the same organization is fairly easy, provided you've taken good notes about the first server's parameters, such as the server name, domain, and network names.

The Notes documentation covers many details of the installation process, but it seemed to conveniently avoid addressing all the questions I had during installation. The opaque writing style of the installation manuals didn't help matters. Of course, planning a Notes installation on a large scale is an involved process, so a certain amount of complexity in the documentation is unavoidable. However, some clearer instructions for such processes as setting up server PassThroughs and connection documents for exchanging mail with other Notes-based companies would be helpful.

Notes 4.1 employs full 32-bit code to improve speed and is available for several 32-bit operating systems, including OS/2 Warp, OS/2 Warp Connect, OS/2 2.11 SMP (symmetric multiprocessing), Windows NT 3.51 (with support for multiple processors), Windows 95, NetWare 3.12, NetWare 4.1, and several Unix platforms, including HP-UX, Sun Solaris, and IBM AIX. Clients include OS/2 Warp and Warp Connect, OS/2 2.11 SMP, Windows 3.1, Windows NT 3.51, Windows 95, and Macintosh System 7.1 and System 7.5 (including a native Power Macintosh version).

I installed the Notes server software on a Windows NT 3.51 Server, a Novell NetWare 3.12 server, and two Windows 95 machines. Likewise, I ran the workstation software on those same NT Server and Windows 95 machines, as well as on a Windows 3.1 workstation and two Macintoshes--one running System 7.1 and the other running MacOS 7.5.2. Installation went smoothly. The installation process on the NetWare server is somewhat more cumbersome than on the other platforms because the NetWare machine can't run the Notes workstation software itself. Instead, the administrator must install the software from a workstation, configuring the server parameters before starting the Notes NLM on the NetWare server.

In setting up dial-in and PassThrough access, I found that Notes did not seem to properly recognize some common telephone line conditions, such as lack of dial tone or a busy signal. As a result, the modem speaker occasionally blasted out the telephone company's recorded message "If you'd like to make a call, please hang up and try again" Two different types of modems (a Hayes Optima 28.8 SmartModem and a SupraFaxModem 28.8) gave the same results with the supplied modem scripts for those modems. Editing the modem script files to recognize more result codes might enable the administrator to solve the problem, but those are the sorts of conditions the script files should already support.

A LOOK AT THE FEATURES

Because Notes 4.1 is an update to a product that's already been proven in a variety of installations--some of which include up to 100,000 users--I decided to focus my attention on the functional changes in the program and the user interface enhancements rather than performance benchmarks. However, that's not to imply that Lotus has neglected the performance side of Notes. To increase speed, the company has refined the replication transport and has made other changes to enable companies to consolidate their Notes installations to run on fewer dedicated Notes servers, thus reducing the amount of time each server must spend replicating with other servers in the organization.

By increasing the number of users each server can handle, network designers can create larger Notes servers--and use fewer of them--to

handle the same total number of users, simplifying administration. In exchange for this benefit, Notes makes more demands on the processor speed, memory, and the data transfer rate to and from the hard drive. Although a Notes 4.1 server can run on roughly the same hardware as a Notes 3.0 server, installing it on a faster machine will make a big difference in the number of simultaneous users it supports and the amount of traffic the server can comfortably handle.

Memory requirements for Lotus Notes installations vary according to the number of simultaneous users, the server or client platform, and the number of additional processes (such as the InterNotes Web Navigator) running on the server. The Notes client for Windows 3.1 requires 6MB of RAM (at a bare minimum); the Windows 95 and OS/2 clients require 8MB of RAM, while the clients for Windows NT and Macintosh require a minimum of 16MB of RAM (slightly less for 680x0 Macintoshes). Unix clients require more memory--at least 24MB of RAM. Adding the Notes Server process onto Windows 95, Windows NT, or OS/2 brings the memory requirement up to 16MB to 32MB for up to 64 users, with an additional 128KB of RAM required for each additional concurrent user. Lotus requires 64MB of RAM and 128MB of SWAP (memory dedicated for task switching) for Unix-based Notes servers and recommends at least 128MB of RAM with 256MB of SWAP. Lotus suggests an additional 32MB of RAM for servers running the InterNotes Web Navigator process, plus 2MB of RAM for each concurrent Web retrieval process.

SERVER PASSTHROUGH

With previous versions of Notes, network designers who needed to provide dial-in access to users and other servers had to carefully estimate how many simultaneous telephone calls each server might receive, and they had to install serial ports and modems onto each server that remote users might need to contact. Notes 4 eases the planning nightmare by introducing the concept of PassThrough servers. With a server's PassThrough enabled, remote users dial in to a single Notes server (often a Notes server dedicated to remote access). Server PassThrough can also provide access to other Notes servers that don't support the same network protocol as the user's workstation. Unlike remote-node capabilities, PassThrough doesn't grant access to the entire Notes network, but to only those servers that have defined that particular PassThrough server.

The administrative tools in Notes 4.1 ease the task of configuring multiple servers. A centralized control panel brings together most of the documents needed to configure a server or manage users.

NOTES FROM ALL OVER

As Notes has grown in popularity, trends towards user mobility have become more apparent. More and more users have laptop computers, and they want to maintain access to Notes databases whether they're in the office or on the road. With Notes 4, juggling the different configurations necessary to support Notes is a simple process, whether the computer is LAN-connected, connected via dial-up, and when no connection is available. Notes includes the framework for defining the connection parameters for each of these conditions (office, travel, home, and disconnected), and the ability to create new location documents. Switching between defined locations is easy with the new Mobile menu within the File menu. I was able to switch between locations smoothly, and Notes kept track of how to reach the home server.

Lotus has simplified the replication process for remote users, and the addition of a replicator work page--which occupies the last selector tab in the user's Notes desktop--has made the process of exchanging data with the home server much easier to visualize. Each scheduled replication event shows up on a list that indicates which direction data flow and whether each event is enabled or disabled. Forcing Notes to immediately replicate with the server is as simple as pressing the Start button (shown in Figure 3).

Hand-in-hand with Notes 4.1's increased mobility is the need for more reliable security. Because a Notes database on a laptop computer is more prone to prying eyes than a server locked away in a secured room, Lotus has given users the ability to completely encrypt databases on their local machines. In addition, local databases now enforce the same level of access control as their server-based counterparts, so unauthorized users can't browse a document collection just because they have physical access to the machine.

Another added security feature seems less crucial: a "spoof-proof" password screen that appears during initial logon to a Notes server, displaying a changing series of hieroglyphics as the user types, supposedly to reduce the likelihood of a stealth program imitating the password screen. Presumably, users get accustomed to the particular pattern of hieroglyphics their passwords produce, and a program trying to mimic the sign-on screen would likely be noticed. This enhancement seems to be a solution in search of a problem.

FIELD-LEVEL REPLICATION

Field-level replication reduces the amount of time spent sending and receiving updates from other Notes servers. Instead of sending an entire document (the previous versions smallest replication unit), Notes 4.1 can send just the fields that have changed within a document. For server-to-server replication across WAN links, this new level of granularity can somewhat reduce overall network traffic. However, the most noticeable changes field-level replication will bring about will be among remote Notes dial-up clients. The reduction in the number of data transfers will reduce telephone charges and reduce the amount of time users have to wait for updates from the server.

A related feature lets users specify which views and folders are replicated. Thus, by selecting one view for replication, a user could dramatically reduce the number of documents involved in replication. Only those documents that show up in the selected view would be copied to or from the home server.

Beginning with the previous release (4.0), Notes has offered an optional way to reduce the size of a centralized mail database by storing only one copy of the body text (and attachments) of messages intended for multiple recipients on the same server. With shared mail enabled (Lotus also calls this feature a single-copy object store), any one e-mail message addressed to two or more users residing on the same server is automatically stored as shared mail. This means that the e-mail message is broken into two parts: the header, which contains the address information, and the body text. The body text is stored in the central mail database, while the header information is forwarded to each recipient's personal mail store (or database). The administrator can specify whether every incoming message is stored in the shared message database or just those messages with more than one recipient on the

server.

Shared mail does not necessarily save storage space in every instance. Users who encrypt every incoming message in their own private message store or who create a replica of their mail file cannot participate in shared mail (they store a full copy of each shared message). This means that most remote or mobile users do not benefit from shared mail, so companies with primarily mobile users may want to disable shared mail.

NO PANE, NO GAIN

Selecting different views of a database has become much easier. By selecting an icon from a hierarchical list of possible views in the left pane of the application window, the user can quickly switch between different views or even look at the design of a database or examine the active agents for a database.

Navigating through a database, although vastly improved from the previous version, can still be a little clunky. For example, while browsing a database, a user might wish to quickly edit a field in the current document or record. Double-clicking on the text in the field does switch you into the editing mode for that document, but Notes will more than likely lose its place in the document, returning you to the beginning of the document which is especially annoying if the field you want to change is situated within an expandable subsection. The field is no longer visible, so you have to manually expand the section containing the desired field to make changes.

INTERNET ENHANCEMENTS

To give users access to Internet resources, such as HTML documents and ftp sites, Lotus includes the InterNotes Web Navigator and the InterNotes Web Retriever software on the Notes 4.1 CD-ROM. InterNotes Web Navigator is a Web browser for Notes clients that works in conjunction with InterNotes Web retriever, an add-on process for the Notes server that automatically retrieves Web pages in HTML format and converts them into native Notes documents. The end result is that Notes clients can access Web pages even if they don't have TCP/IP loaded on their systems. The Notes administrator can configure InterNotes Web Retriever to automatically refresh the converted HTML documents periodically. Once a document's expiration date has passed, InterNotes Web Retriever queries the date of the current Web-based document and retrieves and converts the updated HTML document if necessary. This method of Web browsing can significantly reduce the amount of traffic on a company's connection to its Internet service provider--especially if several users often access the same Web sites to check for updates.

The trade-off in this approach to Web browsing is the lag time involved while the Web Retriever converts the requested HTML pages into Notes-format documents. Just make sure that the Notes server running InterNotes Web Retriever has generous amounts of available memory. With plenty of RAM installed on the Notes server, the HTML-processing lag time is quite acceptable, but on a memory-constrained server the wait can be excruciating.

The flip side of Lotus' Internet strategy for Notes is the ability to publish native Notes databases as HTML documents on the Web. This capability depends on another Notes add-in, the InterNotes Web Publisher 4.0, which, at press time, was not included on the Notes 4.1 CD-ROM but

was available for free from the Lotus Web site (<http://www.lotus.com>).

Lotus plans to include InterNotes Web Publisher or its successor, Domino Server (which was in open beta testing at the time of this writing). The Domino server beta program is available from the Lotus Web site.

A LONG-AWAITED SCRIPT CHANGE

The ability to customize Notes databases by adding formulas to calculate initial values of data fields or to validate user entries has been a powerful feature of Notes from the start. However, programming in Notes has been confusing and cumbersome.

The @ formulas (so named because they start with the @ symbol) in Notes provide a fairly powerful way to add functionality to a Notes database or field; however, a compound formula of any complexity can quickly become an unintelligible mass of keywords, parentheses, and semicolons. In versions of Notes up to 3.0, programmers wanting to add custom features to a Notes database had a choice of either living within the limits of @ function programming or creating their own functions with third-party tools and compilers-specifically, writing programs in the C language to exploit the Notes API

LotusScript, introduced with Notes 4.0, provides the answer to this programming nightmare. As an alternative to Notes' @ functions, LotusScript provides a Visual Basic-like structured programming language, complete with control mechanisms, such as For loops, Do While statements, Select Case structures, and even the dreaded Go Sub statement. Like Visual Basic, LotusScript lets programmers deal with discrete events, such as when the cursor enters or exits a data field or when a field's contents change. Although programmers can still use @ functions to customize the handling of these events, most will prefer to use LotusScript whenever possible.

LotusScript is especially handy in installations that must support different client platforms because most LotusScript statements are platform-independent. In contrast, external programs written to the Notes API must be recompiled and rewritten to support different hardware platforms.

When the user is creating or editing a LotusScript program, Notes can display a list of available commands, functions, and constants. The program even fills in some of the necessary details, such as automatically adding a Loop or Next command, as appropriate, after a Do While or For statement and automatically indenting the code within the loop. What's missing from the programming environment is context-sensitive help on the commands and functions. Although the user can open a separate help database on LotusScript, pressing <F1> with the cursor on the keyword in question merely brings up a dialog box describing the help document, instead of an explanation of the appropriate keyword.

END NOTES

At the time this Test Drive was prepared, Notes 4.1 lacked some of the components essential to integrating the program into a broader, corporatewide e-mail scheme. Specifically, Notes 4.1 did not offer any way to transfer e-mail messages to and from cc:Mail or the Internet (SMTP mail). Companies upgrading from previous versions of Notes could still

use their existing cc:Mail and SMTP gateways, but only if they kept at least one Notes 3.0 server to run the gateways. By the time you read this, Lotus should have released both the cc:Mail and SMTP message transfer agents. Also slated for release in the third quarter of 1996 is Notes 4.5, which will include integrated calendaring and scheduling capabilities.

How Notes will fare in competition with Microsoft Exchange and the Microsoft marketing juggernaut is anybody's guess, but by improving an already solid program, Lotus should at least be able to count on continued loyalty from its large installed base. The emphasis of each program is quite different, so it is likely that companies already committed to the Notes architecture will not want to switch.

Lotus' overhaul of the Notes platform should give existing customers a boost, because of its improved user interface, more consistent administration utilities (see Figure 4), and easy upgrade. For new customers, Notes' ability to publish and retrieve information over the Internet will allow them to deploy Notes in areas previously considered the domain of dedicated Web publishers. These features, combined with improved support for customization and programming, make the Notes platform a powerful choice.

Dave Fogle is a network consultant based in Castro Valley, CA. He can be reached via the Internet at dfogle@ix.netcom.com or 70521.3120@compuserve.com.

EXECUTIVE SUMMARY

Lotus Notes

4.1

Lotus Development

55 Cambridge Pkwy.

Cambridge, MA 02142

(617) 577-8500 or (800) 346-1305

<http://www.lotus.com>

Price: The single-processor server (which includes all platforms) costs \$495, the multiprocessor server (which includes all platforms) costs \$2,295, the full client version (which includes development features) costs \$275, the desktop client costs \$69, and Notes Mail (which is included with the full client and the desktop versions) costs \$55.

Requirements: (for the server): A machine running NetWare 3.12 or higher, OS/2 Warp, OS/2 Warp Connect, OS/2 2.11 SMP, Windows NT (server or workstation) 3.51 or higher, Windows 95, or Unix (including HP-UX, Sun Solaris, or IBM AIX). For the client requirements, include a machine running Windows 3.1 or higher, Windows NT3.51 or higher, Windows 95, a Macintosh running System 7.1 or System 7.5 (the PowerPC version requires System 7.5), or a Unix workstation that supports the same operating systems as the server version. Client memory requirements for Windows 3.1 include 6MB of RAM (8MB is recommended); Windows 95 and OS/2 versions require 8MB of RAM (12MB is recommended); the Windows NT version requires

16MB of RAM (24MB is recommended); the Macintosh version requires 12MB to 16MB of RAM (depending on the processor type, 20MB is recommended); and Unix versions require 24MB of RAM (32MB is recommended). Adding the Notes Server process onto Windows 95, Windows NT, or OS/2 brings the memory requirement up to 16MB to 32MB for up to 64 users, with an additional 128K fRAM required for each additional concurrent user. Unix-based Notes servers require 64MB of RAM and 128MB of SWAP (at least 128MB of RAM with 256MB of SWAP is recommended). Lotus suggests an additional 32MB of RAM for servers running the InterNotes Web Navigator process, plus 2MB of RAM for each concurrent Web retrieval process. Memory requirements also vary with the number of simultaneous users and the number of additional processes. The minimum amount of free hard disk space required is 30MB; 40MB or more is recommended.

Lotus Notes 4.1 is a network database platform for sharing compound documents within and between workgroups. Electronic mail is an integral part of the platform, and support for remote users is included in the base product. Notes servers communicate with clients and other servers using various network protocols and via dial-up modem connections. SPX, TCP/IP, and X.PC protocols are supported on all platforms; other protocols, including SPX-II, NetBIOS/NetBEUI, AppleTalk, and VINES, are supported on certain platforms.

Installation: Installing the software is easy--it's the planning that takes the time. The administrator can set up a single-server installation in an afternoon. Larger installations require time carefully spent planning the layout of the network and the servers--you may want to call in a Notes specialist.

Documentation: Good. The amount of printed documentation provided is impressive, with manuals on planning the network, migrating existing installations, administering Notes, customizing databases, and installing optional components. However, the dense prose tends to make finding answers to common problems more difficult than it should be. Many of the manuals are avail* able as Notes databases, so once the program is installed, users can take advantage of Notes' text searching ability.

Technical Support: Very good. Free (but not toll-free) introductory support is provided for 30 days. After that, technical support is available on a fee basis, starting at \$75 per incident for basic Notes issues and at \$175 per incident for Notes communications issues. Package bundles and support contracts are also available (for example, a 10-incident contract costs \$495). Hours of operation are from 8:00 a.m. to 8:00 p.m. EST, Monday through Friday.

Ease of use: The user interface in Notes 4.1 is vastly improved over Notes 3.0, though switching between viewing and editing documents can still be a bit awkward. Overall, the changes offered by Notes 4.1 will be welcome enhancements. Folders and split window panes help users easily navigate through databases, while the improved mobility features (such as the replicator work page, server PassThrough, field-level replication, and stacking of replica icons) let Notes users work whether they're connected to the network, dialing in via modem, or disconnected from the network.

Warranty: 30-day, money-back guarantee if not satisfied with the product.

Robustness/compatibility: Notes 4.1 is an enhancement to a proven and widely accepted product. Companies implementing Notes will need to ensure

that they select an appropriate hardware and software platform for the server, complete with sufficient memory and hard disk space. A Notes installation can be configured to support almost any kind of user workstation.

· Applicability: Notes can grow to support organizations of almost any size, from a single-server NetWare installation to diverse, worldwide environments encompassing Unix, Windows NT, OS/2, and NetWare over LAN, WAN, and dial-up links. Administrators whose network designs include multiple servers will probably find additional Notes training essential.

Test environment: The Notes Servers were set up on a Compaq ProSignia (486/66) with 48MB of RAM, a 1GB SCSI hard drive, and NetWare 3.12; an HP NetServer 5/100 LH with 64MB of RAM, a 1GB SCSI hard drive, NT Server 3.51; and two Windows 95 workstations: one with 24MB of RAM and 2GB of disk space, the other with 16MB of RAM and 1.6GB of disk space. Client workstations included the NT and Windows 95 stations listed above, as well as Macintosh and Windows 3.1 workstations.

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 Evaluation
Company: Lotus Development Corp.
Product: Lotus Notes 4.1 (Workgroup software)
Topic: Workgroup Software
 Software Single Product Review

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